



# Payment of fees and costs

EPO - DG 1

27.06.2006

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01 Name of payer  
Shell International B.V.  
Intellectual Property Services  
Address  
P.O. Box 384 (vdB)  
NL - 2501 CJ THE HAGUE, The Netherlands

Payor's reference  
TS 7640 EPC P  
Mode of payment  
☐ Bank/giro transfer<sup>1</sup>  
☐ Enclosed cheque No.  
☒ Debit from deposit account with the EPO is requested<sup>2</sup>  
Bank/giro office  
Deposit account No.  
28090005

03 Patent application / patent No. (please use a separate form for each application)  
EP 04804628.8  
PCT

	Code		Currency	Amount
04	001	Filing fee	EUR	
05	002	Search fee	EUR	
06	005	Designation fee(s) <sup>3</sup>	EUR	560.00
07	015	Claims fee(s) (Rule 31(1) EPC)	EUR	
08	055	Additional copy	EUR	
09	006	Examination fee	EUR	
10	007	Fee for grant including fee for printing (up to 35 pages)	EUR	
11	008	Additional fee for printing (more than 35 pages)	EUR	
12	033	Renewal fee for the 3rd year	EUR	
13	034	Renewal fee for the 4th year	EUR	
14	035	Renewal fee for the 5th year	EUR	
15		Extension fee(s) for <sup>4</sup> :	EUR	
16			EUR	
17			EUR	
18			EUR	
19			EUR	
20			EUR	
21			EUR	
22		Total	EUR	560.00

ZUR KASSE

Signature J H P J Peereboom (GA 17132)  
EPO Form 1010 02/06 Explanations 1-4 see overleaf.

The Hague, The Netherlands, 26 June 2006  
Place, date



To the European Patent Office

Entry into the European phase (EPO as designated or elected Office)

European application number	EP04804628.8
PCT application number	PCT/EP2004/053196
PCT publication number	WO2005054657
Applicant's or representative's reference	TS 7640 EPC P
<b>1. Applicant</b> Particulars of the applicant(s) are contained in the international publication or were recorded by the International Bureau subsequent to the international publication. Changes which have not yet been recorded by the International Bureau are set out here: Address for correspondence	<input checked="" type="checkbox"/>  <input type="checkbox"/>
<b>2. Representative 1</b> This is the representative who will be listed in the Register of European Patents and to whom notifications will be made. Name  Registration No  Address of place of business   Telephone  Fax  e-mail  Any additional representative(s) is/are listed here:	ZEESTRATEN, Mr. Albertus Wilhelmus Joannes  0200440.6  Shell International B.V. Intellectual Property Services PO Box 384 THE HAGUE, 2501 CJ Netherlands +31 70 377 2567 +31 70 377 6141 jan.vandenberg@shell.com  <input type="checkbox"/>
<b>3. General Authorisation:</b> An individual authorisation is attached. A general authorisation has been registered under No: A general authorisation has been filed, but not yet registered. The authorisation filed with the EPO as PCT receiving Office expressly includes the European phase.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<b>4. Request for examination</b> Examination of the application under Art. 94 EPC is hereby requested. The examination fee is being (has been, will be) paid. Request for examination in an admissible non-EPO language:	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Verzocht wordt om onderzoek van de aanvraag als bedoeld in Art. 94.
<b>5. Copies</b> One or more additional sets of copies of the documents cited in the supplementary European search report are hereby requested. Number of additional sets of copies	<input type="checkbox"/>
<b>6. Documents intended for proceedings before the EPO</b> 6.1 Proceedings before the EPO as designated Office (PCT I) are to be based on	

the following documents:

the application documents published by the International Bureau (with all claims, description and drawings), where applicable with amended claims under Art. 19 PCT

unless replaced by the amendments attached.

Where necessary, clarifications should be attached as 'Other Documents'

6.2 Proceedings before the EPO as elected Office (PCT II) are to be based on the following documents:

the documents on which the international preliminary examination report is based, including any annexes

unless replaced by the amendments attached.

Where necessary, clarifications should be attached as 'Other Documents'

If the EPO as International Preliminary Examining Authority has been supplied with test reports, these may be used as the basis of proceedings before the EPO.

## 7. Translations

Translations in one of the official languages of the EPO (English, French, German) are attached as crossed below:

\* In proceedings before the EPO as designated or elected Office (PCT I + II):

Translation of the international application (description, claims, any text in the drawings) as originally filed, of the abstract as published and of any indication under Rule 13bis.3 and 13bis.4 PCT regarding biological material

Translation of the priority application(s)

It is hereby declared that the international application as originally filed is a complete translation of the previous application (Rule 38(5) EPC)

\* In addition, in proceedings before the EPO as designated Office (PCT I):

Translation of amended claims and any statement under Art. 19 PCT, if the claims as amended are to form the basis for the proceedings before the EPO (see Section 6).

\* In addition, in proceedings before the EPO as elected office (PCT II):

Translation of annexes to the international preliminary examination report

## 8. Biological material

The invention relates to and/or uses biological material deposited under Rule 28 EPC.

The particulars referred to in Rule 28(1)(c) EPC (if not yet known, the depository institution and the identification reference(s)) [number, symbols, etc.] of the depositor) are given in the international publication or in the translation submitted under Section 7 on:

page(s) / line(s)

A copy of the receipt(s) of deposit issued by the depository institution is attached

will be filed at a later date

A waiver of the right to an undertaking from the requester pursuant to Rule 28(3) EPC is attached.

## 9. Nucleotide and amino acid sequences

The items required under Rules 5.2 and 13ter PCT and Rule 111(3) EPC have already been furnished to the EPO.

The sequence listing as part of the description is attached in PDF format.

The sequence listing does not include matter that goes beyond the content of the application as filed.

In addition, the sequence listing data is attached in computer-readable form in accordance with WIPO Standard 25.

The sequence listing data in computer-readable form in accordance with WIPO Standard 25 is identical to the sequence listing in PDF format.

## 10. Designation fees

10.1 It is currently intended to pay seven times the amount of the designation

fee. The designation fees for all the EPC contracting states designated in the international application are thereby deemed to have been paid (Art. 2 No. 3 RFees).

10.2 It is currently intended to pay fewer than seven designation fees for the following EPC contracting states designated in the international application:

☒

10.3 It is requested that no communication under Rules 85a(1) or 69(1) need be notified in respect of the contracting states not indicated. If an automatic debit order has been issued, the EPO is authorised, on expiry of the basic period under Article 79(2), to debit seven times the amount of the designation fee. If less than seven states are indicated, the EPO shall debit designation fees only for those states, unless it is instructed to do otherwise before expiry of the basic period.

☒

#### 11. Extension of the European patent

This application is also considered as being a request for extension to all the non-contracting states to the EPC designated in the international application with which "extension agreements" were in force on the date of filing the international application. However, the extension only takes effect if the prescribed extension fee is paid.

It is currently intended to pay the extension fee for the following states:

☒

#### 12. List of enclosed documents

Description of document	Original file name	Assigned file name
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#### 13. Debit from deposit account

Currency

☒

EUR

The European Patent Office is hereby authorised, to debit from the deposit account with the EPO any fees and costs indicated on the fees page.

Deposit account number

28090005

Account holder

Shell International B.V.

#### 14. Reimbursements (if any) should be made to the following EPO deposit account:

Number and account holder

☒

Shell International B.V., 28090005

#### 15. Fees

		Factor/Reduction applied	Fee schedule	Amount to be paid
15-1	002e Fee for supplementary European search for applications filed before 01.07.2005	0	720.00	0.00
15-2	005 Designation fee	0	80.00	0.00
15-3	006e Examination fee (Euro-PCT without supplementary European search report)	0.4	1 490.00	596.00
15-4	015 Claims fee	4	45.00	180.00
15-5	020 Basic national fee for an international application	1	95.00	95.00
Total:			EUR	871.00

#### 16. Annotations

#### 17. Signature(s) of applicant(s) or representative

Place: THE HAGUE  
 Date: 23.June 2006  
 Signed by: NL, Shell International BV, A. Zeestraten  
 1825  
 Capacity: (Representative)



Europäisches  
Patentamt

European  
Patent Office

Office européen  
des brevets

### Acknowledgement of receipt

We hereby acknowledge receipt of the form for entry into the European phase (EPO as designated or elected Office) as follows:

Submission number	131889	
PCT application number	PCT/EP2004/053196	
Date of receipt	23 June 2006	
Receiving Office	European Patent Office, The Hague	
Your reference	TS 7640 EPC P	
Applicant		
Country		
Documents submitted	package-data.xml ep-euro-pct.xml	epf1200.pdf (3 p.) application-body.xml
Submitted by	NL, Shell International BV, A. Zeestraten 1825 Subject: NL, Shell International BV, A. Zeestraten 1825; Issuer: , European Patent Office, European Patent Office CA	
Method of submission	Online	
Date and time receipt generated	23 June 2006, 15:20:45 (CEST)	
Digest	43:D2:77:5B:2F:DB:1A:2F:1E:B0:89:E8:A5:9B:44:1B:76:DC:4E:DB	

/European Patent Office/

## PATENT COOPERATION TREATY

## PCT

REC'D 11 JAN 2006


WIPO

PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference TS 7640 PCT	<b>FOR FURTHER ACTION</b> See Form PCT/PEA/416	
International application No. PCT/EP2004/053196	International filing date (day/month/year) 01.12.2004	Priority date (day/month/year) 01.12.2003
International Patent Classification (IPC) or national classification and IPC F02M27/02, F02D19/08, F02B43/10		
Applicant SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B.V.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau) a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand  30.09.2005	Date of completion of this report  11.01.2006	
Name and mailing address of the international preliminary examining authority:   European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Döring, M  Telephone No. +31 70 340-	



# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/EP2004/053196

## Box No. 1 Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
    - ☐ international search (under Rules 12.3 and 23.1(b))
    - ☐ publication of the international application (under Rule 12.4)
    - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

### Description, Pages

1-13 as originally filed

### Claims, Numbers

1-14 as originally filed

### Drawings, Sheets

1/2-2/2 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70:2(c)):-

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**International application No.  
PCT/EP2004/053196

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	5-9,12,13
	No: Claims	1-4,10,11,14
Inventive step (IS)	Yes: Claims	
	No: Claims	1-14
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

**2. Citations and explanations (Rule 70.7):****see separate sheet**



**INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(SEPARATE SHEET)**

International application No.

PCT/EP2004/053196

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

- 1 Reference is made to the following documents (D1-D3):

D1: US 2003/168263 A1 (BOTTI JEAN JOSEPH ET AL) 11 September 2003  
D2: US 2003/115857 A1 (PREIS MICHAEL ET AL) 26 June 2003  
D3: EP-A-1 030 395 (DELPHI TECHNOLOGIES INC) 23 August 2000

- 2 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of **claims 1-4, 10, 11 and 14** is not new in the sense of Article 33(2) PCT.

- 2.1 The document D1 discloses (the references in parentheses applying to this document) a process for operating a compression ignition internal combustion engine (30) in combination with a catalytic partial oxidation reformer (10) (cf. Figure 1, page 3, paragraphs 31 and 32 and page 3-4, paragraph 39) and an exhaust gas aftertreater (90), wherein: a mixture of a first fuel (11) and air (63), wherein the first fuel comprises Fischer-Tropsch derived fuel (cf. page 5, paragraph 55), is introduced in the combustion chamber of the engine (30) (cf. in particular page 3, paragraph 31); exhaust gas is discharged from the engine (30); a second fuel (11) and oxygen (59) are supplied (at least during cold start) to the catalytic partial oxidation reformer (10) to produce synthesis gas (20, 21), wherein the second fuel (11) comprises Fischer-Tropsch derived fuel; at least part (20) of the synthesis gas (20, 21) is supplied the exhaust gas aftertreater (90) and another part (21) to the combustion chamber of the engine (30); or to both.

- 2.2 The subject-matter of the **independent claim 1** is therefore not new (Article 33(2) PCT).

- 2.3 Furthermore, document D3 also (cf. in particular Figure 1 and column 5, paragraph 21) discloses the subject-matter of the **independent claim 1** (Article 33(2) PCT).

**INTERNATIONAL PRELIMINARY  
REPORT ON PATENTABILITY  
(SEPARATE SHEET)**

International application No.

PCT/EP2004/053196

- 2.4 **Dependent claims 2-4, 10, 11 and 14** do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to novelty because the subject-matter of **claims 2-4, 10 and 14** is already disclosed by the document D1. Moreover, an exhaust gas recirculation system according to **claim 11** is known from the document D3.
- 3 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of **dependent claims 5-9, 12 and 13** does not involve an inventive step in the sense of Article 33(3) PCT.
- 3.1 The supply of synthesis gas to NOx abatement systems for regeneration purposes as described in the **dependent claims 5-9** is already known from the document D2. In order to improve the regeneration process, the person skilled in the art would combine the teaching of the two documents D1 and D2 without the exercise of inventive skill, in order to solve the problem posed.
- 3.2 The volumetric ratios noted in **claims 12 and 13** fall in a merely straightforward chosen range which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill.